

**To:** Guy, Kerry[Guy.Kerry@epa.gov]  
**From:** Samuels, William B.  
**Sent:** Tue 8/11/2015 6:01:03 PM  
**Subject:** RE: Gold King Mine Release update  
[gk\\_spill.pptx](#)

Kerry

Hera are some additional time of travel results. This are preliminary results. We are also working on concentration calculations.

Bill

**William B. Samuels, Ph.D | Leidos**

Director, Center for Water Science and Engineering

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[william.b.samuels@leidos.com](mailto:william.b.samuels@leidos.com)

**From:** Samuels, William B.  
**Sent:** Monday, August 10, 2015 1:41 PM  
**To:** 'Guy, Kerry'  
**Cc:** Bahadur, Rakesh  
**Subject:** RE: Gold King Mine Release update

Kerry,

Some preliminary results using ICWater Quick Trace. We are continuing to work on this.

Bill

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**From:** Guy, Kerry [<mailto:Guy.Kerry@epa.gov>]

**Sent:** Monday, August 10, 2015 12:48 PM

**To:** Samuels, William B.

**Subject:** Fwd: Gold King Mine Release update

Bill. See if we posted any data yet. There are links in the email.

Sent from my iPhone

Begin forwarded message:

**From:** "Ledbetter, Ray" <Ledbetter.Ray@epa.gov>  
**Date:** August 9, 2015 at 9:24:42 PM MDT  
**To:** "Guy, Kerry" <Guy.Kerry@epa.gov>  
**Subject:** Fwd: Gold King Mine Release update

Sent from my iPhone

Begin forwarded message:

**From:** "Cristiano, Gina" <Cristiano.Gina@epa.gov>  
**Date:** August 9, 2015 at 8:58:57 PM MDT  
**To:** "Ackerman, Joyce" <Ackerman.Joyce@epa.gov>, "Allison Majure@state.nm.us" <Allison.Majure@state.nm.us>, "ann.bruzzese@PSMedicalCenter.org" <ann.bruzzese@PSMedicalCenter.org>, "Bahrman, Sarah" <Bahrman.Sarah@epa.gov>, "bgardner@silverton.co.us" <bgardner@silverton.co.us>, "bobbylieb@frontier.net" <bobbylieb@frontier.net>, "Bohan, Suzanne" <bohan.suzanne@epa.gov>, "brad.blake@co.laplata.co.us" <brad.blake@co.laplata.co.us>, "brad.cochennet@PSMedicalCenter.org" <brad.cochennet@PSMedicalCenter.org>, "bsmartinez@fs.fed.us" <bsmartinez@fs.fed.us>, "Buhl, Rick" <Buhl.Rick@epa.gov>, "byrd\_s@fortlewis.edu" <byrd\_s@fortlewis.edu>, "Card, Joan" <Card.Joan@epa.gov>, "Chavez, Luke" <Chavez.Luke@epa.gov>, "chris@frontier.net" <chris@frontier.net>, "citycouncil@durangogov.org" <citycouncil@durangogov.org>, "CMacpherson@sjbhd.org" <CMacpherson@sjbhd.org>, "Copeland, Michael" <Copeland.Michael@epa.gov>, "Cristiano, Gina" <Cristiano.Gina@epa.gov>, "Crossland, Ronnie" <Crossland.Ronnie@epa.gov>, "dariotti@utah.gov" <dariotti@utah.gov>, "david.kreutzer@state.co.us" <david.kreutzer@state.co.us>, "david.kurz@state.co.us" <david.kurz@state.co.us>, "Dhieux, Joyel" <Dhieux.Joyel@epa.gov>, "dietrich@utah.gov" <dietrich@utah.gov>, "director@sjcph.org" <director@sjcph.org>, "doug.jamison@state.co.us" <doug.jamison@state.co.us>, "dspangler@utah.gov" <dspangler@utah.gov>, "dwong@utah.gov" <dwong@utah.gov>, "egaddis@utah.gov" <egaddis@utah.gov>, "ellen.roberts.senate@state.co.us" <ellen.roberts.senate@state.co.us>, "Eoc, Epahq" <Eoc.Epahq@epa.gov>, "Foster, Althea" <Foster.Althea@epa.gov>, "Garcia, David" <Garcia.David@epa.gov>, "gary.baughman@state.co.us" <gary.baughman@state.co.us>, "Gleason, Michael" <Gleason.Michael@epa.gov>, "greg.nauble@state.co.us" <greg.nauble@state.co.us>, "Griswold, Hays" <Griswold.Hays@epa.gov>, "gwen.lachelt@co.laplata.co.us" <gwen.lachelt@co.laplata.co.us>, "Hayes, Mark" <hayes.mark@epa.gov>, "Hestmark, Martin" <Hestmark.Martin@epa.gov>, "jason.king@state.co.us" <jason.king@state.co.us>, "jodi.scarpa@psmedicalcenter.org" <jodi.scarpa@psmedicalcenter.org>, "joe.kerby@co.laplata.co.us" <joe.kerby@co.laplata.co.us>, "jpaul.brown.house@state.co.us" <jpaul.brown.house@state.co.us>, "julie.westendorff@co.laplata.co.us" <julie.westendorff@co.laplata.co.us>

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**Subject: Gold King Mine Release update**

Hello,

Below the latest statement from EPA on the Gold King Mine Release.

Thank you, Gina

## **8/9/15 Gold King Mine Release Update**

### **BACKGROUND**

On August 5, while investigating the Gold King Mine in Colorado, the EPA and State Division of Reclamation Mining and Safety triggered a large release of mine wastewater into Cement Creek. The EPA is working closely with first responders and local and state officials to monitor water contaminated by the release. The release's path flows through 3 of the EPA's regions (Region 8 (Colorado/Utah & Southern Ute Tribe); Region 6 (New Mexico), and Region 9 (Navajo Nation). The EPA has activated its Emergency Operations System to ensure coordination among its regions, laboratories and national program offices in Washington, D.C. The EPA is closely coordinating with the officials in Colorado, New Mexico, Utah, Southern Ute Tribe and Navajo Nation.

For the latest information, photos, and the data when available, visit:

[http://epaosr.org/site/site\\_profile.aspx?site\\_id=11082](http://epaosr.org/site/site_profile.aspx?site_id=11082).

- **Claims process**

A claims process exists for compensating citizens who suffer personal injury or property damage caused by U.S. government actions. The process is available in the EPA's regulations at 40 CFR Part 10, and includes guidance on documentation that may be required to support claims for loss of employment and loss of income, among other claims.

Claims for monetary compensation may be filed by submitting a Standard Form 95 specifying the nature of the loss suffered and the EPA actions, if known, causing the loss or damage to property, to either of the following contacts:

Richard Feldman  
Claims Officer  
U.S. EPA Office of General Counsel  
1200 Pennsylvania Avenue, NW (MC 2399A)  
Washington, D.C. 20460

Michael Nelson  
U.S. EPA Region 8 Office of Regional Counsel  
1595 Wynkoop Street (MC 8RC)  
Denver, CO 80202

Alternatively, claimants may submit signed electronic versions of Standard Form 95 to the EPA for the Gold King Mine Release via e-mail at [R8\\_GKM\\_Claims@epa.gov](mailto:R8_GKM_Claims@epa.gov) beginning Tuesday, August 11, 2015.

The fillable PDF version of Standard Form 95 is available in the documents section of this website or via the link below:

<http://www.epaosc.org/sites/11082/files/StandardForm95.pdf>

Standard Form 95 is used to present claims against the United States under the Federal Tort Claims Act (FTCA) for property damage, personal injury, or death allegedly caused by a federal employee's negligence or wrongful act or omission occurring within the scope of the employee's federal employment.

Standard Form 95 is not required to present a claim under the FTCA, but it is a convenient format for supplying the information necessary to bring an FTCA claim. Please note that a completed form must state a claim for money damages in a "sum certain" amount (that is, a specific amount) claimed for personal injury, death, or injury to or loss of property. In addition, if a sum certain is not specified in Standard Form 95 block 12d, or in accompanying information, a submission cannot be considered a valid presentation of a claim.

Although the EPA's regulations state that the EPA has 6 months to resolve a claim, the Agency will make every effort to respond to Gold King Mine release claims as soon as possible. Claims must be presented to the EPA within two years after the claim accrues.

- **Mine discharge treatment**

The flow from the Gold King mine was measured at 548 gallons per minute as of noon on August 8. The mine water is being treated in a series of settling ponds constructed near the portal. The treatment appears to be effective. The pH (acidity) of the water is being raised with the addition of lime and sodium hydroxide solution to facilitate sedimentation of the metals in the ponds. Flocculant is being added to increase the amount of sedimentation. The treated water that is being discharged to Cement Creek has a pH of 5.5.

- **ASPECT**

This morning, the EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) flyover observed that the conditions from Farmington to Durango show improvement. While the San Juan River remains discolored, the leading edge of the contaminant plume is no longer visible. These visual observations are a useful indicator, however, water quality data will provide the definitive information about river conditions. Aerial photos will be available in the next day or two at <http://epaossc.org/goldkingmine>.

- **Water quality data**

Yesterday, the EPA collected water quality samples from nine locations in the river near intakes for Aztec, Farmington, Lower Valley Water Users Association, Morning Star Water Supply System and the North Star Water User Association. Each of these locations will continue to monitor as the release makes its way past these areas. In the San Juan River, the release is moving at about 2.5 miles per hour and as of 3 p.m. yesterday it had reached Nenahnezad, NM, approximately 9 miles west of Farmington. The EPA's Mobile Command Post arrived in Farmington today. At the request of New Mexico Environmental Department (NMED), the EPA is sending additional scientist and technicians to New Mexico to assist with water quality monitoring, sampling and outreach.

Water quality data from throughout the affected region continues to be collected and evaluated. This morning the EPA released a detailed data table of the sampling in Cement Creek and the upper portions of the Animas River from August 5, the date of the incident, and August 6. The data table contains a list of analyzed constituents, largely metals, and their numeric value in micrograms per liter, which is equal to parts per billion, or ppb.

Collection, transport and lab analysis of metals in water is complex and time consuming. Workers at the lab and data experts are working continuously to evaluate and summarize the data.

The incident, which occurred on August 5, caused a spike in concentrations of total and dissolved metals as the contaminated mine water moved downstream. These concentrations began to trend toward pre-event conditions by August 6. August 7 and 8 data, when it is evaluated, will inform whether the trend towards pre-event



conditions continues. EPA is working with state and local government officials to determine when to reopen both drinking water intakes and open the river for recreation.

The contaminant plume is depositing sediments and we are beginning to assess the impacts of the sediment.

Link to data table: <http://epaosc.org/goldkingmine> (under “documents”)

- **Discharge estimates**

USGS measured increased flows at a streamgage starting at about 12:30 p.m. and ending about 7:15 p.m. This resulted in a provisional calculated flow volume of 3,043,067 gallons discharged from the Gold King Mine. The EPA’s original estimate of 1 million gallons discharged from the Gold King Mine was based on an estimate of the size of the adit. A streamgage is an instrument that measures volume by measuring flow, which is much more precise.

- **EPA resources dedicated to the response**

The EPA has deployed ten On Scene Coordinators in Silverton, Durango and Farmington, New Mexico. Water quality experts and several technicians and contractors will respond to the discharge as it reaches communities in New Mexico. Two Public Information Officers (PIOs) are also on site in Durango at the Joint Information Center (JIC). In the EPA’s regional office in Denver, there are 21 employees and one contractor providing support services to the response. Several incident management team positions will be deployed to Durango on Monday. Two Community Involvement Coordinators (CICs) were deployed to Farmington today and will meet with local Navajo Chapter officials and host public meetings in the coming days. The CICs will also partner with Navajo Nation EPA (NNEPA) and Navajo Department of Public Safety to ensure comprehensive outreach to all affected Navajo Chapters. The EPA has tapped into several contracting mechanisms to provide support for the response, which includes water quality sampling, drinking water and agricultural water distribution as well as construction and maintenance of the water treatment ponds.

- **List of work with local, tribal, state and federal agencies**

EPA Region 8 is coordinating the incident with EPA Regions 6 and 9, the States of Colorado, Utah and New Mexico, and the Navajo Nation and Southern Ute Tribes as well as the San Juan County, City of Durango and the Town of Silverton.

EPA Region 8 is coordinating with Agency for Toxic Substances and Disease Registry (ATSDR) in response to public health concerns/questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan County Basin Health Department in Colorado.

The Colorado Fish and Wildlife Conservation Office is monitoring effects on wildlife and aquatic life in the affected area. The Colorado Department of Public Health and the Environment is assisting with drinking water concerns.

EPA Region 9 is working with the Navajo Nation and the Bureau of Indian Affairs. The discharge has moved quickly and is in the vicinity of the Navajo Nation boundary, near Kirtland, NM. Navajo officials have reacted quickly, assessing their well fields and drinking and irrigation water intake systems and issuing a precautionary "do not use" public service announcement regarding water from potentially impacted sources. Region 9 held a conference call today with NNEPA and Navajo Department of Public Safety.

The Navajo EPA surface water monitoring program (Shiprock Office) collected water and sediment samples from the San Juan River yesterday - prior to the release's impact. Region 9 provided 2 contractors and 4 additional personnel are en route to coordinate and conduct increased sample collection and lab analysis in conjunction with NNEPA.

EPA Region 6 is coordinating with the NMED to determine the potential impacts on water quality in the state and impacted communities that rely on the river. The EPA and NMED are providing free water quality testing for private drinking water well owners in the affected area as well as providing water quality monitoring for the five drinking water systems with intakes from the river.

The EPA is working with U.S. Fish and Wildlife Service and the U.S. Geological Service.

Gina Cristiano

Emergency Response & Planning Coordinator

EPA Region 8

303-312-6688